

see similar files: <http://130.149.60.45/~farbmetrik/VE33/VE33.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

Ostwald optimal colours (o) of maximum (m) C _{AB} for D50, Y _w =100, Y _m =520_770, CIELAB data															%
i ₁ , λ ₁	i ₂ , λ ₂	L* ₁₀₀	a* ₁₀₀	b* ₁₀₀	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code		%		
1 405	32 564	80.64	-79.12	-32.66	85.6	0.1753	-0.0939	202.4	17 486	38 592	Cm	%			
7 435	33 565	80.84	-92.99	-16.32	94.41	0.1682	-0.0862	189.9	18 490	46 634		%			
10 450	33 566	81.12	-108.35	7.14	108.58	0.1604	-0.0752	176.2	19 497	-1 497c		%			
12 460	33 567	81.46	-116.97	28.05	120.29	0.1561	-0.0654	166.5	21 506	-1 506c		%			
13 465	33 568	81.81	-119.26	39.57	125.66	0.1552	-0.0601	161.6	22 511	-1 511c		%			
14 470	34 570	82.4	-119.23	51.38	129.83	0.1555	-0.0547	156.6	23 519	-1 519c		%			
15 475	34 573	83.39	-115.8	63.56	132.1	0.1579	-0.0494	151.2	25 527	-1 527c	Gm	%			
15 480	35 578	85.46	-107.76	67.11	126.95	0.1631	-0.0484	148.0	26 531	-1 531c		%			
17 485	37 587	88.09	-90.84	90.18	128.01	0.1726	-0.039	135.2	28 544	-1 544c		%			
18 490	44 620	95.17	-39.39	110.34	117.16	0.1986	-0.0333	109.6	32 561	-1 561c	max	%			
19 495	-1 495c	97.49	-13.34	121.9	122.63	0.2105	-0.0295	96.2	33 568	12 463		%			
20 500	-1 500c	96.81	-10.45	127.99	128.42	0.2118	-0.0268	94.6	33 569	13 466		%			
22 510	-1 510c	94.88	-2.34	137.84	137.86	0.2153	-0.0218	90.9	34 571	14 471		%			
23 520	-1 519c	93.58	2.85	141.13	141.16	0.2177	-0.0198	88.8	34 572	14 473	Ym	%			
25 530	-1 529c	90.23	15.24	146.8	147.59	0.2236	-0.0162	84.0	35 575	15 477		%			
27 540	-1 539c	86.01	29.18	144.12	147.04	0.2308	-0.0132	78.5	35 579	16 480		%			
28 545	-1 544c	83.62	36.35	141.27	145.87	0.2347	-0.012	75.5	36 581	16 481		%			
29 550	-1 549c	81.05	43.6	137.66	144.4	0.239	-0.011	72.4	36 583	16 483		%			
30 555	-1 554c	78.3	50.75	133.47	142.8	0.2434	-0.0102	69.1	37 585	16 484		%			
32 560	-1 560c	72.41	64.12	123.93	139.53	0.2528	-0.0092	62.6	38 590	17 486		%			
380	770	100.0	0.0	0.0	0.0	0.2164	-0.0785	0.0				%			

Ostwald optimal colours (o) of maximum (m) C _{AB} for D50, Y _w =100, Y _m =770_520, CIELAB complementary															%
i ₁ , λ ₁	i ₂ , λ ₂	L* ₁₀₀	a* ₁₀₀	b* ₁₀₀	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code			%	
32 564	1 405	71.0	67.41	105.72	125.38	0.2553	-0.0231	57.4	38 592	17 486	Rm			%	
33 565	7 435	70.74	75.66	26.96	80.32	0.2602	-0.0643	19.6	46 634	18 490				%	
33 566	10 450	70.4	84.09	-8.18	84.49	0.2653	-0.0828	354.4	-1 497c	19 497				%	
33 567	12 460	69.97	89.18	-25.67	92.8	0.2685	-0.0921	343.9	-1 506c	21 506				%	
33 568	13 465	69.5	91.5	-32.76	97.19	0.2702	-0.096	340.2	-1 511c	22 511				%	
34 570	14 470	68.72	93.74	-39.06	101.55	0.272	-0.0995	337.3	-1 519c	23 519				%	
34 573	15 475	67.36	96.12	-45.25	106.24	0.2743	-0.1032	334.7	-1 527c	25 527	Mm			%	
35 578	15 480	64.23	100.99	-50.62	112.97	0.2796	-0.1073	333.3	-1 531c	26 531				%	
37 587	17 485	59.67	103.27	-63.42	121.19	0.285	-0.1167	328.4	-1 544c	28 544				%	
44 620	18 490	41.19	95.32	-96.8	135.85	0.3001	-0.1557	314.5	-1 561c	32 561	min			%	
-1 495c	19 495	30.29	58.93	-116.79	130.82	0.2804	-0.1936	296.7	12 466	33 568				%	
-1 500c	20 500	34.03	42.92	-111.26	119.25	0.2595	-0.1799	291.0	13 463	33 569				%	
-1 510c	22 510	42.26	8.18	-98.28	98.62	0.2235	-0.1554	274.7	14 471	34 571				%	
-1 519c	23 520	46.59	-9.12	-91.17	91.63	0.2091	-0.1449	264.2	14 473	34 572	Bm			%	
-1 529c	25 530	55.28	-39.96	-76.64	86.43	0.1882	-0.1275	242.4	15 477	35 575				%	
-1 539c	27 540	63.34	-62.09	-62.98	88.44	0.1771	-0.1147	225.4	16 480	35 579				%	
-1 544c	28 545	67.02	-69.55	-56.7	89.74	0.1743	-0.1096	219.1	16 481	36 581				%	
-1 549c	29 550	70.49	-74.83	-50.77	90.42	0.1729	-0.1053	214.1	16 483	36 583				%	
-1 554c	30 555	73.73	-78.04	-45.21	90.19	0.1727	-0.1015	210.0	16 484	37 585				%	
-1 560c	32 560	79.46	-78.96	-35.36	86.52	0.1749	-0.0954	204.1	17 486	38 590				%	
380	770	100.0	0.0	0.0	0.0	0.2164	-0.0785	0.0						%	

Ostwald optimal colours (o) of maximum (m) C _{AB} for D50, Y _w ,10=100, Y _m =520_770, CIELAB data															%
i ₁ , λ ₁	i ₂ , λ ₂	L* ₁₀₀	a* ₁₀₀	b* ₁₀₀	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code			%	
1 405	31 559	79.59	-77.2	-34.19	84.44	0.176	-0.0944	203.8	15 479	37 589	Cm			%	
7 435	32 561	79.86	-91.81	-15.16	93.06	0.1685	-0.0853	189.3	16 484	58 693				%	
10 450	32 562	79.99	-106.14	10.32	106.64	0.161	-0.0733	174.4	18 493	-1 493c				%	
12 460	32 564	80.41	-112.32	32.6	116.95	0.1581	-0.0628	163.8	20 503	-1 503c				%	
13 465	33 566	81.01	-111.86	45.12	120.61	0.1587	-0.0571	158.0	22 512	-1 512c				%	
14 470	34 570	82.18	-107.6	58.61	122.53	0.1615	-0.0511	151.4	24 521	-1 521c				%	
15 475	35 576	84.23	-97.14	73.13	121.59	0.1679	-0.0451	143.0	26 531	-1 531c	Gm			%	
16 480	38 590	88.39	-73.47	90.47	116.54	0.1812	-0.0388	129.0	28 543	-1 543c				%	
17 485	-1 485c	97.06	-11.31	114.51	115.07	0.2116	-0.0322	95.6	32 563	11 458				%	
18 490	-1 490c	96.45	-8.75	121.65	121.97	0.2127	-0.0291	94.1	32 564	12 460	max			%	
19 495	-1 495c	95.71	-5.61	127.93	128.05	0.2141	-0.0262	92.5	33 565	12 462				%	
20 500	-1 500c	94.84	-1.91	133.35	133.36	0.2158	-0.0236	90.8	33 566	12 464				%	
21 510	-1 509c	93.81	2.3	137.86	137.88	0.2177	-0.0212	89.0	33 567	13 466				%	
24 520	-1 520c	89.67	17.74	147.75	148.81	0.2251	-0.015	83.1	34 571	14 471	Ym			%	
25 530	-1 529c	87.89	23.66	147.2	149.09	0.2281	-0.0131	80.8	34 573	14 473				%	
28 540	-1 540c	81.47	42.32	139.84	146.11	0.2385	-0.0073	73.1	35 579	15 476				%	
29 545	-1 545c	78.99	48.54	135.98	144.39	0.2423	-0.0052	70.3	36 581	15 477				%	
29 550	-1 549c	78.99	48.54	135.98	144.39	0.2423	-0.0052	70.3	36 581	15 477				%	
31 555	-1 555c	73.59	60.31	126.89	140.49	0.2505	0.0	64.5	37 587	15 479				%	
32 560	2 411	70.73	66.43	91.22	112.85	0.2551	-0.0304	53.9	38 591	16 480				%	
380	770	100.0	0.0	0.0	0.0	0.2166	-0.0782	0.0						%	

Ostwald optimal colours (o) of maximum (m) C _{AB} for D50, Y _{w,10} =100, Y _m =770_520, CIELAB complementary															%
i ₁ , λ ₁	i ₂ , λ ₂	L* ₁₀₀	a* ₁₀₀	b* ₁₀₀	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code			%	
31 559	1 405	72.26	63.47	103.03	121.01	0.2528	-0.0252	58.3	37 589	15 479	Rm			%	
32 561	7 435	71.95	72.06	23.05	75.66	0.2578	-0.0663	17.7	58 693	16 484				%	
32 562	10 450	71.79	79.33	-10.79	80.06	0.2621	-0.0837	352.2	-1 493c	18 493				%	
32 564	12 460	71.28	83.47	-27.25	87.8	0.2647	-0.0923	341.9	-1 503c	20 503				%	
33 566	13 465	70.54	85.3	-34.29	91.94	0.2662	-0.0961	338.1	-1 512c	22 512				%	
34 570	14 470	69.01	87.54	-41.42	96.85	0.2684	-0.1003	334.6	-1 521c	24 521				%	
35 576	15 475	66.13	89.85	-49.78	102.72	0.2716	-0.1057	331.0	-1 531c	26 531	Mm			%	
38 590	16 480	59.09	91.66	-64.37	112.01	0.278	-0.1171	324.9	-1 543c	28 543				%	
-1 485c	17 485	32.71	47.82	-111.58	121.39	0.266	-0.1821	293.2	11 458	32 563				%	
-1 490c	18 490	35.8	34.81	-107.5	113.0	0.2505	-0.1724	287.9	12 460	32 564	min			%	
-1 495c	19 495	39.04	20.95	-102.82	104.93	0.2358	-0.1629	281.5	12 462	33 565				%	
-1 500c	20 500	42.42	6.67	-97.66	97.89	0.2224	-0.154	273.9	12 464	33 566				%	
-1 509c	21 510	45.88	-7.52	-92.18	92.48	0.2105	-0.1458	265.3	13 466	33 567				%	
-1 520c	24 520	56.5	-45.46	-74.63	87.39	0.1851	-0.1249	238.6	14 471	34 571	Bm			%	
-1 529c	25 530	60.04	-55.36	-68.66	88.2	0.18	-0.1191	231.1	14 473	34 573				%	
-1 540c	28 540	69.95	-73.85	-51.77	90.19	0.1734	-0.1055	215.0	15 476	35 579				%	
-1 545c	29 545	72.95	-76.41	-46.62	89.51	0.1734	-0.1019	211.3	15 477	36 581				%	
-1 549c	29 550	72.95	-76.41	-46.62	89.51	0.1734	-0.1019	211.3	15 477	36 581				%	
-1 555c	31 555	78.42	-76.8	-37.2	85.33	0.1757	-0.096	205.8	15 479	37 587				%	
2 411	32 560	80.85	-76.45	-31.35	82.63	0.1769	-0.0928	202.2	16 480	38 591				%	
380	770	100.0	0.0	0.0	0.0	0.2166	-0.0782	0.0						%	

see similar files: <http://130.149.60.45/~farbmetrik/VE33/VE33.HTM>
technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20130201-VE33/VE33L0NA.TXT /PS
application for measurement of display output, no separation
TUB material: code=rha4ta

Ostwald optimal colours (o) of maximum (m) C _{AB} for D50, Y _w =100, Y _m =520_770, CIELAB data																				%
i ₁ , λ ₁	i ₂ , λ ₂	L* ₁₀₀	a* ₁₀₀	b* ₁₀₀	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code	%								%
1 405	32 564	80.64	-79.12	-32.66	85.6	0.1753	-0.0939	202.4	17 486	38 592	Cm	%								%
7 435	33 565	80.84	-92.99	-16.32	94.41	0.1682	-0.0862	189.9	18 490	46 634		%								%
10 450	33 566	81.12	-108.35	7.14	108.58	0.1604	-0.0752	176.2	19 497	-1 497c		%								%
12 460	33 567	81.46	-116.97	28.05	120.29	0.1561	-0.0654	166.5	21 506	-1 506c		%								%
13 465	33 568	81.81	-119.26	39.57	125.66	0.1552	-0.0601	161.6	22 511	-1 511c		%								%
14 470	34 570	82.4	-119.23	51.38	129.83	0.1555	-0.0547	156.6	23 519	-1 519c		%								%
15 475	34 573	83.39	-115.8	63.56	132.1	0.1579	-0.0494	151.2	25 527	-1 527c	Gm	%								%
15 480	35 578	85.46	-107.76	67.11	126.95	0.1631	-0.0484	148.0	26 531	-1 531c		%								%
17 485	37 587	88.09	-90.84	90.18	128.01	0.1726	-0.039	135.2	28 544	-1 544c		%								%
18 490	44 620	95.17	-39.39	110.34	117.16	0.1986	-0.0333	109.6	32 561	-1 561c	max	%								%
19 495	-1 495c	97.49	-13.34	121.9	122.63	0.2105	-0.0295	96.2	33 568	12 463		%								%
20 500	-1 500c	96.81	-10.45	127.99	128.42	0.2118	-0.0268	94.6	33 569	13 466		%								%
22 510	-1 510c	94.88	-2.34	137.84	137.86	0.2153	-0.0218	90.9	34 571	14 471		%								%
23 520	-1 519c	93.58	2.85	141.13	141.16	0.2177	-0.0198	88.8	34 572	14 473	Ym	%								%
25 530	-1 529c	90.23	15.24	146.8	147.59	0.2236	-0.0162	84.0	35 575	15 477		%								%
27 540	-1 539c	86.01	29.18	144.12	147.04	0.2308	-0.0132	78.5	35 579	16 480		%								%
28 545	-1 544c	83.62	36.35	141.27	145.87	0.2347	-0.012	75.5	36 581	16 481		%								%
29 550	-1 549c	81.05	43.6	137.66	144.4	0.239	-0.011	72.4	36 583	16 483		%								%
30 555	-1 554c	78.3	50.75	133.47	142.8	0.2434	-0.0102	69.1	37 585	16 484		%								%
32 560	-1 560c	72.41	64.12	123.93	139.53	0.2528	-0.0092	62.6	38 590	17 486		%								%
380	770	100.0	0.0	0.0	0.0	0.2164	-0.0785	0.0				%								%

rgb* _{e,ab} and CIE data of a elementary hue circle according to CIE R1-47 for Ostwald colours for CIE illuminant D50																	
Yxy, abc _{AB} , ABC _{AB} , LabC* _{ab} h _{ab} data for relative spacing of elementary hue h _{ab} of CIELAB for CIE 2 degree observer																	
Elementary hue circle with 44 intended elementary hue angles: h _{ab} = 27.1, 88.5, 164.3, 263.9 of CIELAB, and 16 intended hue angles:																	
27.1 42.5 57.8 73.2 88.5 107.5 126.4 145.3 164.3 189.2 214.1 239.0 263.9 294.7 325.5 356.3																	
CIELAB data of CIE test colours 9 (R): 41.8 61.9 31.7, 10 (Y): 81.9 1.7 71.5, 11 (G): 51.6 -41.1 11.5, 12 (B): 29.2 -5.2 -49.3																	
no _{ab}	Y	x	y	a	b	C _{AB}	A	B	C _{AB}	h _{AB}	L*	a*	b*	C* _{ab}	h _{ab}	rgb* _{e,ab}	Code _{ab}
000	41.8	0.559	0.338	1.655	-0.121	0.722	28.9	8.7	30.2	16.8	70.7	73.8	42.5	85.2	29.9	1.00 0.00 0.00	% R00Y
001	41.9	0.595	0.368	1.616	-0.039	0.714	27.3	12.1	29.9	24.0	70.8	70.3	76.0	103.6	47.2	1.00 0.25 0.00	% R25Y
002	42.2	0.608	0.384	1.58	-0.066	0.695	26.0	13.6	29.3	27.6	71.0	67.1	108.6	127.7	58.2	1.00 0.50 0.00	% R50Y
003	59.8	0.56	0.438	1.28	0.0	0.456	18.8	19.6	27.2	46.1	81.7	41.7	138.6	144.8	73.2	1.00 0.75 0.00	% R75Y
004	83.9	0.493	0.5	0.985	-0.005	0.325	1.7	27.2	27.3	86.3	93.4	3.3	141.4	141.5	88.6	1.00 1.00 0.00	% Y00G
005	89.5	0.422	0.544	0.776	-0.023	0.259	-16.8	27.4	32.1	121.5	95.8	-33.6	112.6	117.5	106.6	0.75 1.00 0.00	% Y25G
006	77.3	0.343	0.604	0.568	-0.033	0.494	-30.6	22.9	38.2	143.1	90.4	-74.1	97.7	122.6	127.1	0.50 1.00 0.00	% Y50G
007	67.6	0.264	0.626	0.421	-0.069	0.602	-36.7	17.6	40.7	154.3	85.8	-105.8	71.0	127.4	146.1	0.25 1.00 0.00	% Y75G
008	59.5	0.2	0.562	0.357	-0.168	0.628	-36.1	9.6	37.4	165.0	81.6	-118.5	81.8	123.2	164.0	0.00 1.00 0.00	% G00B
009	58.2	0.178	0.396	0.449	-0.428	0.524	-29.9	-5.7	30.5	190.8	80.8	-93.8	-15.1	95.0	189.1	0.00 1.00 0.50	% G25B
010	41.4	0.141	0.287	0.492	-0.794	0.662	-19.5	-19.2	27.4	224.5	70.5	-74.8	-50.7	90.4	214.1	0.00 1.00 1.00	% G50B
011	25.0	0.123	0.204	0.605	-1.312	1.045	-8.9	-24.5	26.1	249.9	57.0	-45.2	-73.6	86.4	238.3	0.00 0.50 1.00	% G75B
012	15.8	0.123	0.142	0.865	-2.06	1.733	-1.5	-27.3	27.3	266.7	46.7	-9.5	-90.9	91.4	263.9	0.00 0.00 1.00	% B00R
013	6.4	0.128	0.065	1.947	-4.899	4.674	6.3	-29.3	30.0	282.1	30.4	52.9	-116.8	128.2	294.3	0.50 0.00 1.00	% B25R
014	24.1	0.354	0.156	2.273	-1.253	1.601	31.6	-22.3	38.7	324.7	56.2	103.0	-69.8	124.4	325.8	1.00 0.00 1.00	% B50R
015	41.3	0.477	0.269	1.768	-0.374	0.806	33.2	-1.8	33.3	356.8	70.4	83.5	-6.4	83.7	355.5	1.00 0.00 0.50	% B75R
016	41.8	0.559	0.338	1.655	-0.121	0.722	28.9	8.7	30.2	16.8	70.7	73.8	42.5	85.2	29.9	1.00 0.00 0.00	% R00Y
CIEXYZ data of CIE test colours 9 (R): 23.3 12.4 3.2, 10 (Y): 58.8 60.2 9.5, 11 (G): 12.0 19.8 11.9, 12 (B): 5.2 5.9 21.2																	
5 step equidistant grey scale with intended lightness: L* = 0.0, 25.0, 50.0, 75.0, 100.0																	
000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00 0.00 0.00	% N000W
001	4.4	0.345	0.358	0.964	-0.329	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25 0.25 0.25	% N025W
002	18.4	0.345	0.358	0.964	-0.329	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50 0.50 0.50	% N050W
003	48.2	0.345	0.358	0.964	-0.329	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.75 0.75 0.75	% N075W
004	100.0	0.345	0.358	0.964	-0.329	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00 1.00 1.00	% N100W

Ostwald optimal colours (o) of maximum (m) C _{AB} for D50, Y _{w,10} =100, Y _m =520_770, CIELAB data														%
i ₁ , λ ₁	i ₂ , λ ₂	L* ₁₀₀	a* ₁₀₀	b* ₁₀₀	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code			%
1 405	31 559	79.59	-77.2	-34.19	84.44	0.176	-0.0944	203.8	15 479	37 589	Cm			%
7 435	32 561	79.86	-91.81	-15.16	93.06	0.1685	-0.0853	189.3	16 484	58 693				%
10 450	32 562	79.99	-106.14	10.32	106.64	0.161	-0.0733	174.4	18 493	-1 493c				%
12 460	32 564	80.41	-112.32	32.6	116.95	0.1581	-0.0628	163.8	20 503	-1 503c				%
13 465	33 566	81.01	-111.86	45.12	120.61	0.1587	-0.0571	158.0	22 512	-1 512c				%
14 470	34 570	82.18	-107.6	58.61	122.53	0.1615	-0.0511	151.4	24 521	-1 521c				%
15 475	35 576	84.23	-97.14	73.13	121.59	0.1679	-0.0451	143.0	26 531	-1 531c	Gm			%
16 480	38 590	88.39	-73.47	90.47	116.54	0.1812	-0.0388	129.0	28 543	-1 543c				%
17 485	-1 485c	97.06	-11.31	114.51	115.07	0.2116	-0.0322	95.6	32 563	11 458				%
18 490	-1 490c	96.45	-8.75	121.65	121.97	0.2127	-0.0291	94.1	32 564	12 460	max			%
19 495	-1 495c	95.71	-5.61	127.93	128.05	0.2141	-0.0262	92.5	33 565	12 462				%
20 500	-1 500c	94.84	-1.91	133.35	133.36	0.2158	-0.0236	90.8	33 566	12 464				%
21 510	-1 509c	93.81	2.3	137.86	137.88	0.2177	-0.0212	89.0	33 567	13 466				%
24 520	-1 520c	89.67	17.74	147.75	148.81	0.2251	-0.015	83.1	34 571	14 471	Ym			%
25 530	-1 529c	87.89	23.66	147.2	149.09	0.2281	-0.0131	80.8	34 573	14 473				%
28 540	-1 540c	81.47	42.32	139.84	146.11	0.2385	-0.0073	73.1	35 579	15 476				%
29 545	-1 545c	78.99	48.54	135.98	144.39	0.2423	-0.0052	70.3	36 581	15 477				%
29 550	-1 549c	78.99	48.54	135.98	144.39	0.2423	-0.0052	70.3	36 581	15 477				%
31 555	-1 555c	73.59	60.31	126.89	140.49	0.2505	0.0	64.5	37 587	15 479				%
32 560	2 411	70.73	66.43	91.22	112.85	0.2551	-0.0304	53.9	38 591	16 480				%
	380 770	100.0	0.0	0.0	0.0	0.2166	-0.0782	0.0						%